

SCAN\_TEST =

```
pattern = 0;
apply "grpl_load" 0 =
chain "chain_0" =
"1111101011100001111100011100110110101000001010010\
10001100000111000110100001101001110010001010011110\
11011100011000010001100011110010001001010100000011\
10101010010011001011011001011001100100000110010010\
0111010000000011110111011001100111010111011010010\
0010011111001010110100001001100000011000011101101\
1010111011011010001101100111001000110100011011100\
1010111100100000001110110010000110011000011111000\
000100100010101100111011100011111111100111100111\
0101100011100111110100011000111101110111001110011\
001000110101100101010111000101010101111010011000\
0011011110111011101111001110100010010001000011111\
1110110001001110110111001110111111011011100110011\
1111011100011000010111110000100001100011111101111\
0101000010000001000110101010111101001110110110100\
0111101111101111111101001101011001110001100010100\
1101111011110010000100001011111111110000010110011\
10010011001110011110101000000110100101001100011010\
1110000010101101011010100101101111111010011110001\
00011010011111101100010100110110101011010100100110\
10111110101011100010000100111000011000011000010111\
0110101100000110011010011000011011000001011110110\
1101001101110000110001001110001110110101001000110\
110000011011111111101111011010010001101010000011\
1011011001000101100001100010011110101011111011001\
1111000101000100011000111001110101110000100010000\
10110110111010010011001001110110010010100010110111\
10011100101100110110010011000001010110101011110100\
01010000101101101100100101011000010011011100010110\
0011111000101011111000000100101000011011000001100\
00011101110010000111001000001011000001011000110001"
```

Fig. 1a

chain "chain 1" -  
"1011110010101010001111100111000110110011011001111\  
011100111010011001111101100001110101010111110110\  
00111010001000110110101011010101010010010000100101\  
01001010100001101001100100110110000010011000001010\  
01010011100000000101010110110000111111010001010001\  
01011000101011110011101100100110011110100011011000\  
0011111100000011101100000001110011111011001100110\  
1101110000000000100010101110000111110001101000110\  
11011001000000011000111010001011101110011010101111\  
0001000101011011001001111111011001000001111110000\  
11100100011101110011011001011011000110111011001100\  
00110001100010110111101001011101011100001011010010\  
00011011010100111101001001011010100111011000110101\  
0101000000110011010000001111100100101000001100011\  
00000111010111011000010100011100011001110100010101\  
0100001000000000011011100010010011001010000000111\  
01010001110101000001000100000011000011000001010101\  
10100011011110000001100000110110010011101111110\  
010010001011010001011101101110100000011010000010\  
1000110111100100001110101110101101000011101110\  
1011000010100011010011110110010010001111010001111\  
0010101111000000111101110111010001101000100011\  
0001001100111011010000110111000010100111011110110\  
1100000110010111011010101010011110101101000001111\  
010011101100011111100001001110001100110001011000\  
101011101011010101000000101000101111110111011011\  
10001110010010100100001101001101100011001011110101\  
0100001000000011110100011101100010010000000101001\  
111111010011000101101110101000001010001110000001\  
1100101000110110010010110110001101111110011010\  
011111000111111000001001100011011101100000";

FIG. 1b

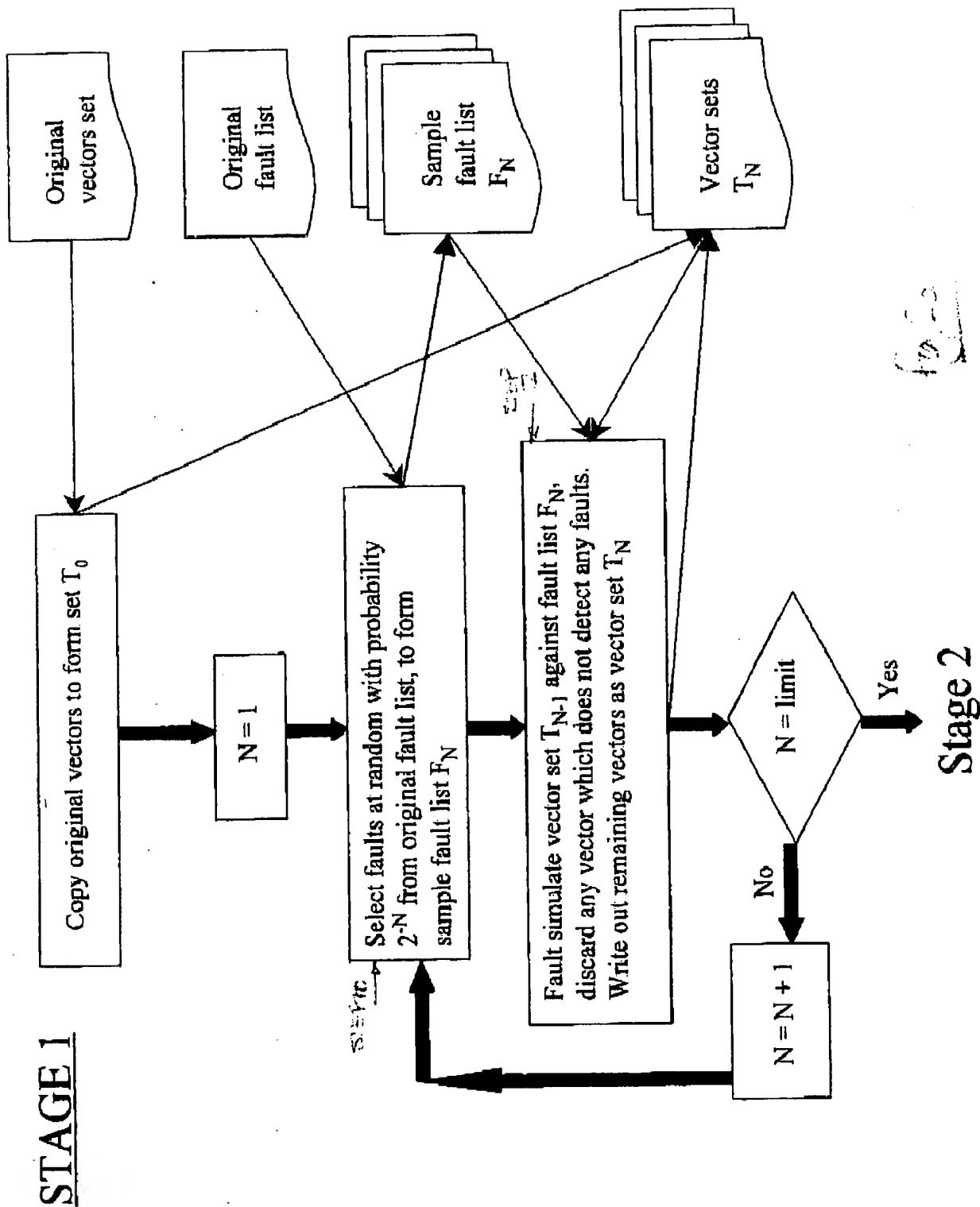


Fig 2<sup>a</sup>

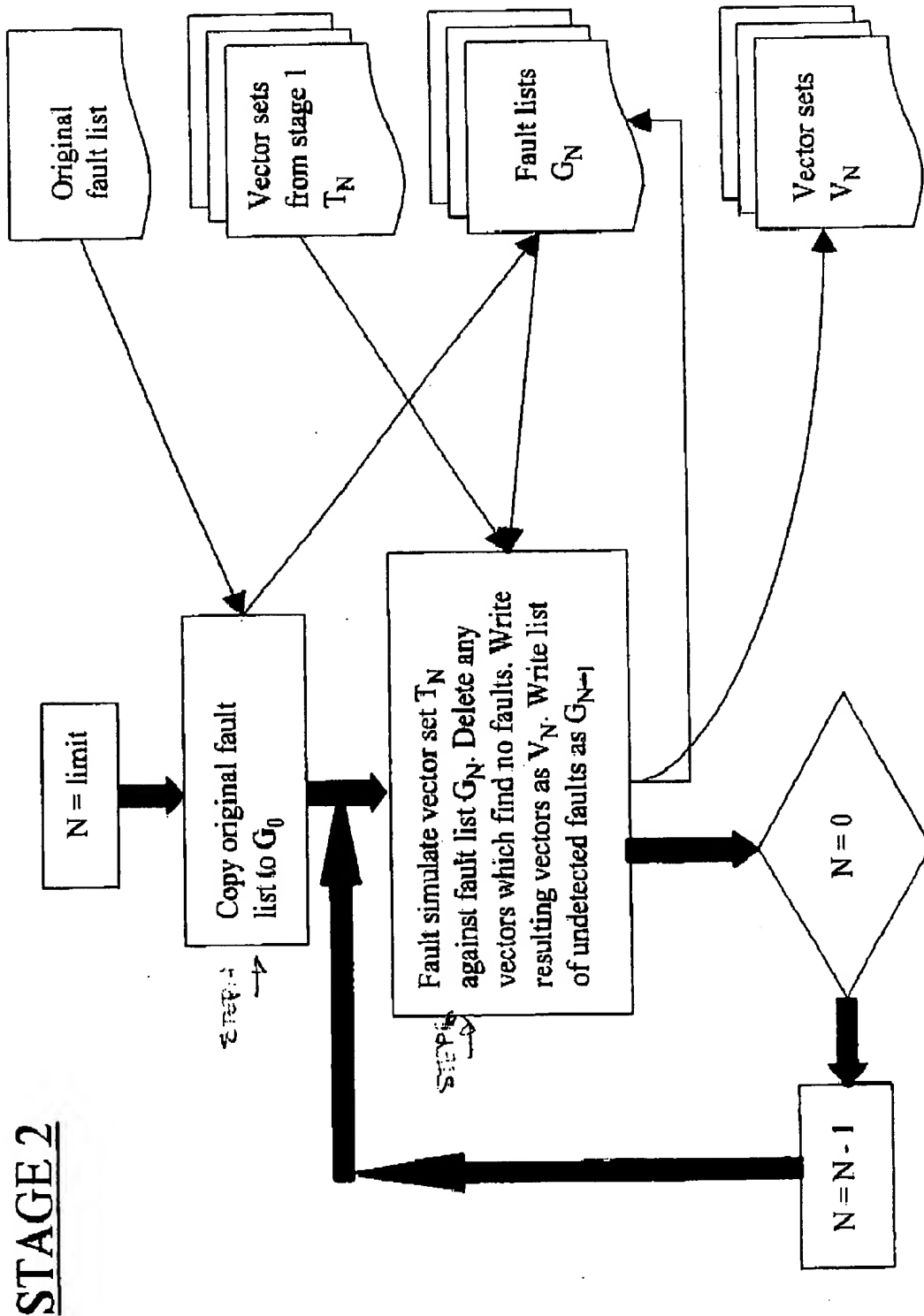


Fig 2b

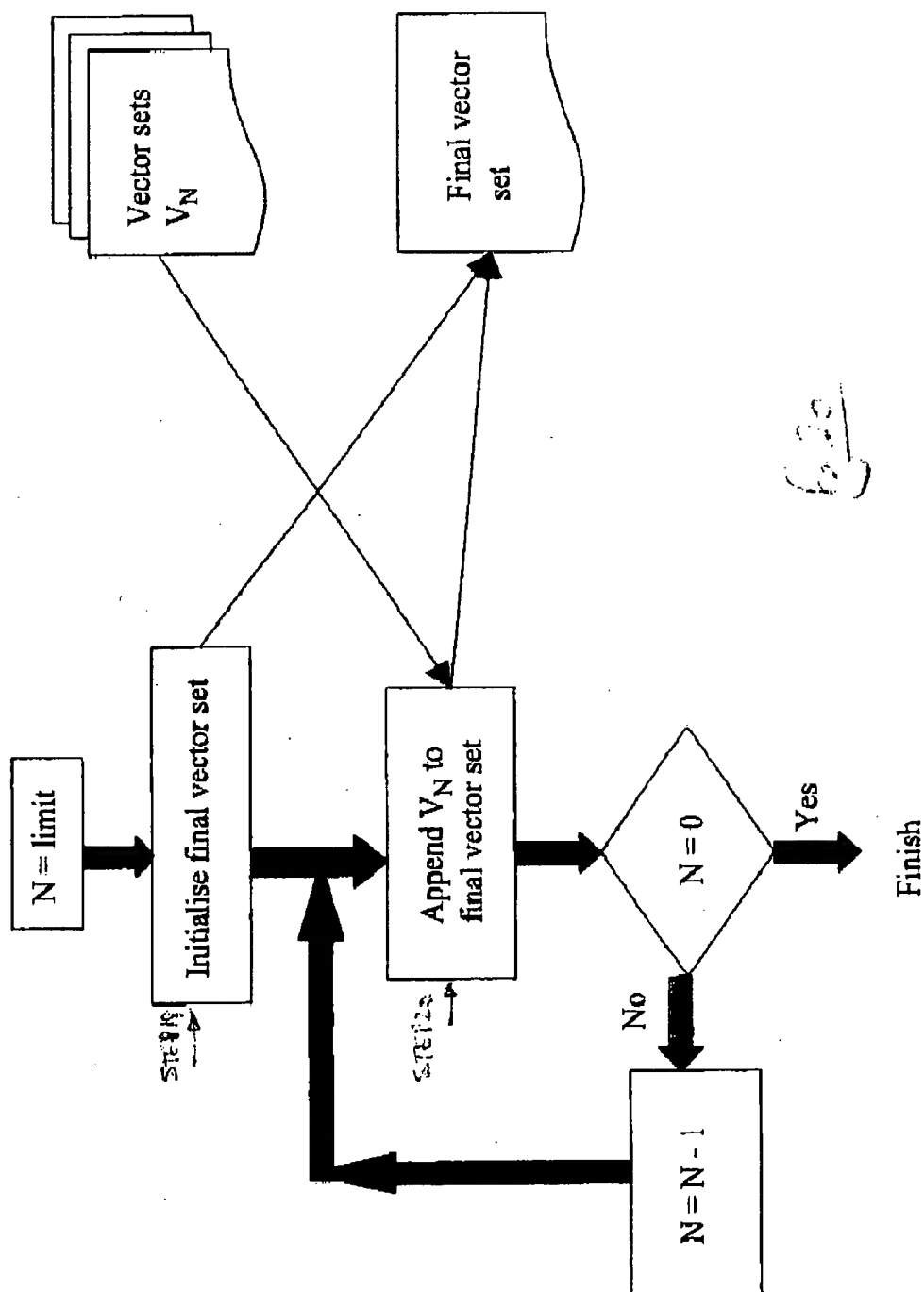


Fig 2:

STAGE 3

# Key to flow diagrams

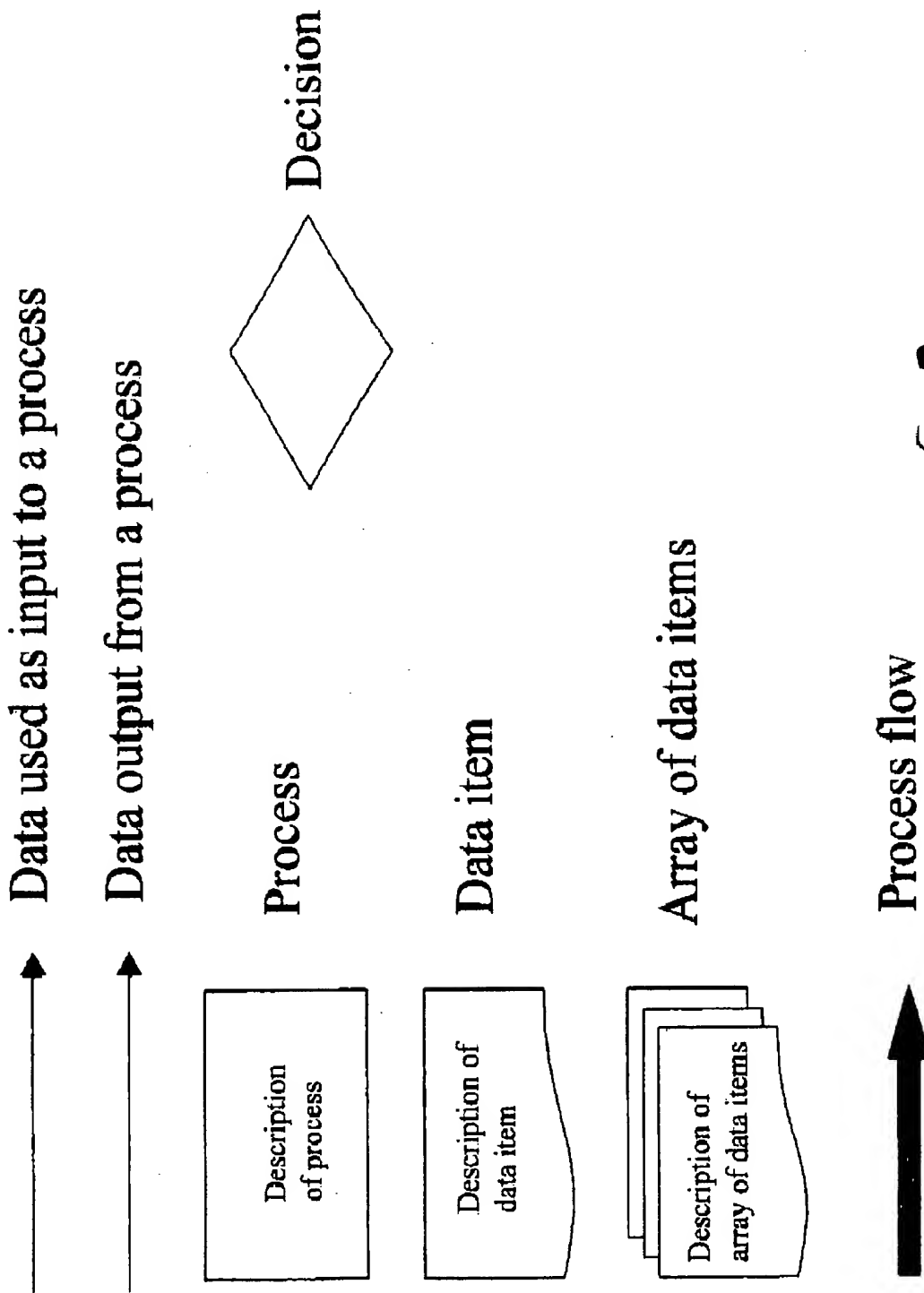
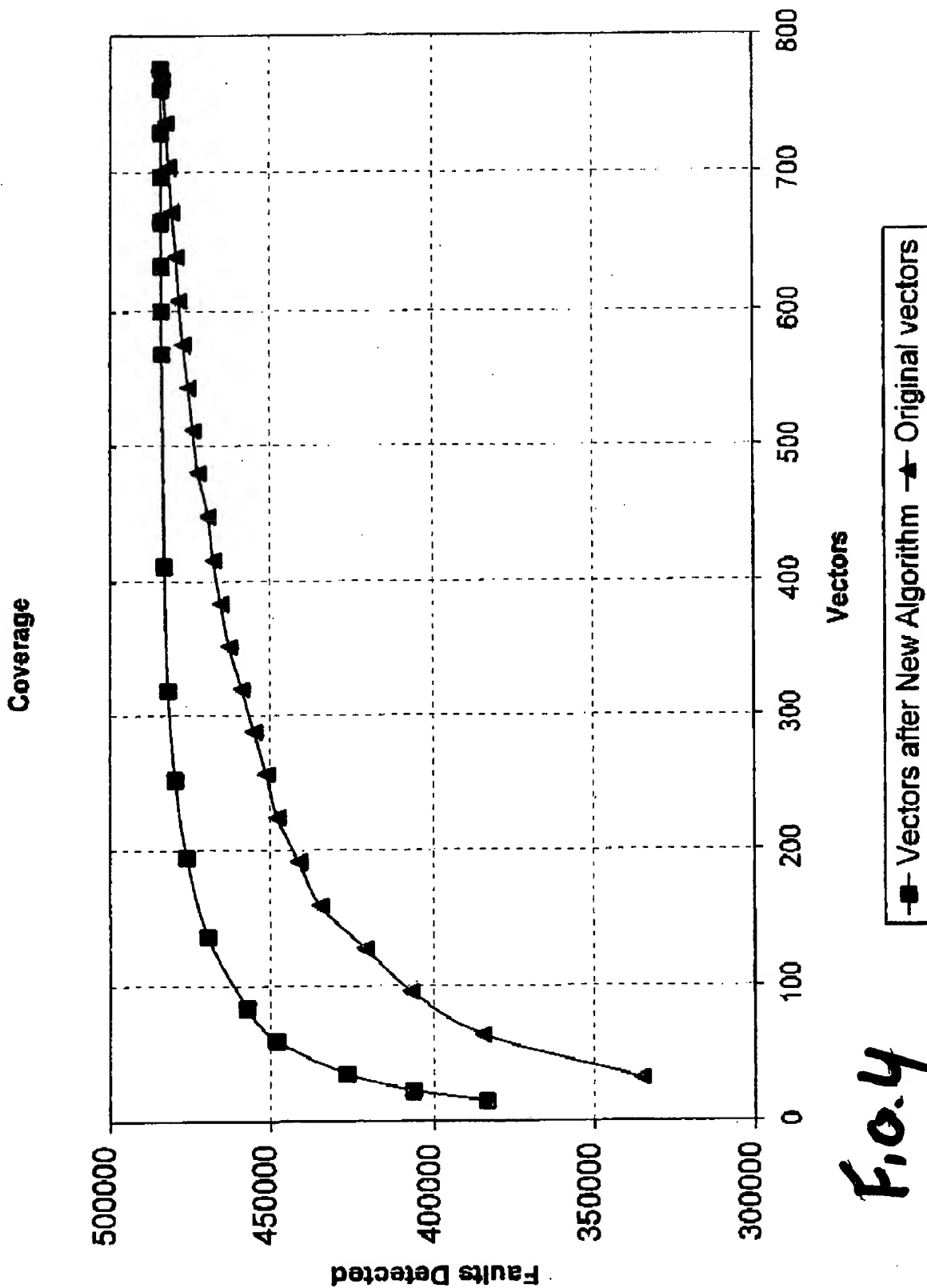


fig 3



**F.O.4**